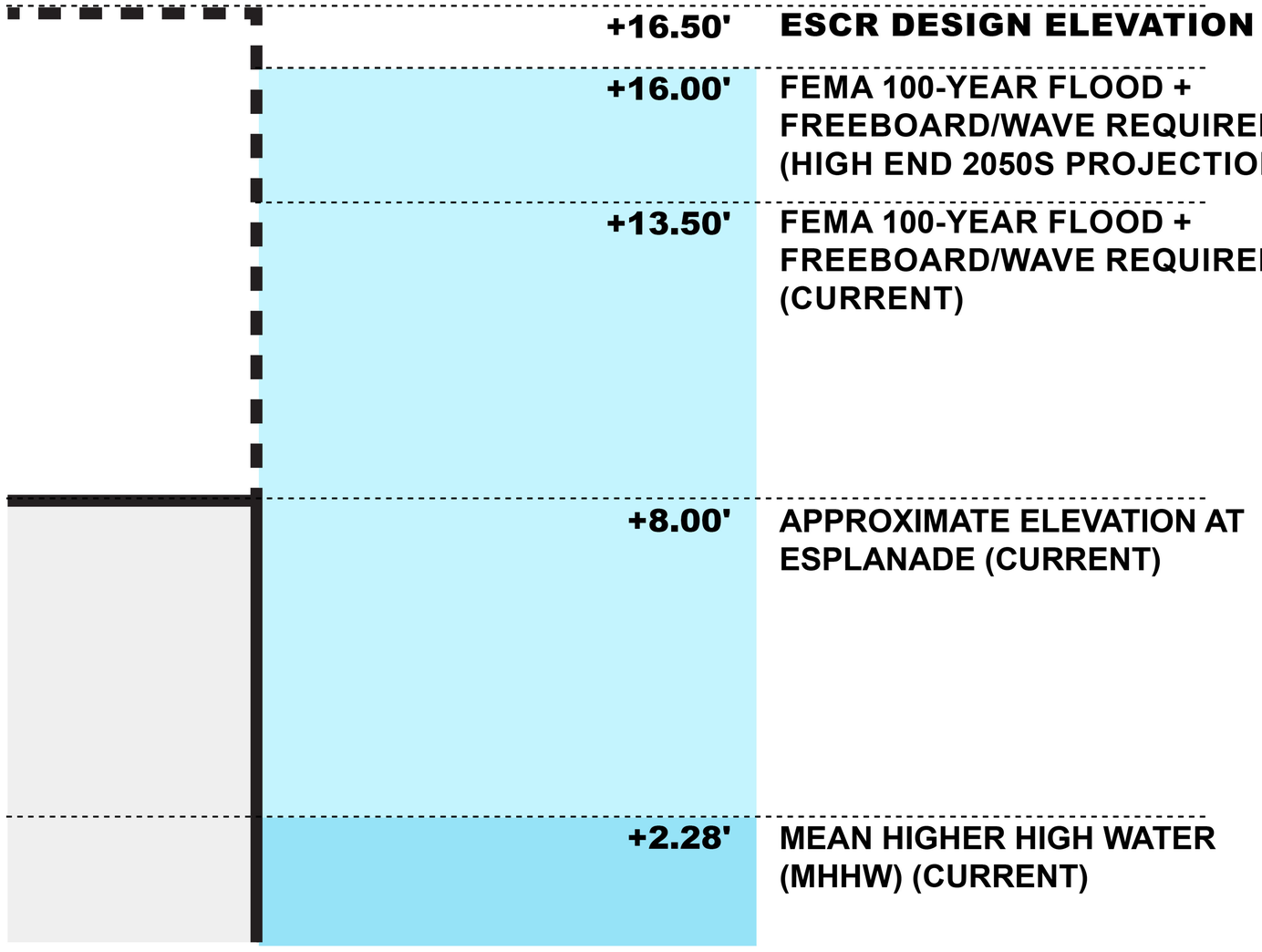
PROTECTING AGAINST FUTURE FLOODING

FLOOD DESIGN CRITERIA

HUD FUNDING REQUIREMENT:
THE SYSTEM MUST PURSUE FEMA ACCREDITATION WITH MINIMUM SYSTEM ELEVATION AT CURRENT FEMA 100-YEAR STORM ELEVATION + WAVE ACTION

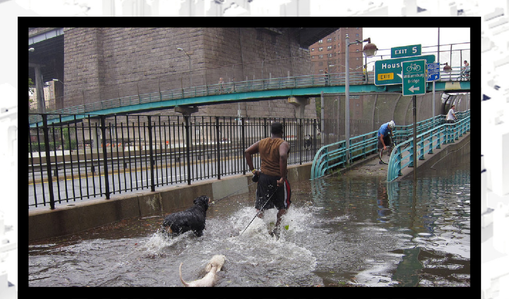
DESIGN HEIGHT:
DESIGN HEIGHT DETERMINED BY 2050s 100-YEAR STORM ELEVATION (INCL 30" SEA LEVEL RISE) + WAVE ACTION



NOTE: ALL ELEVATIONS SHOWN IN NAVD88

PROTECTING AGAINST FUTURE FLOODING

DRAINAGE CRITERIA



RAIN FLOODING, FDR
HURRICANE IRENE, 2011

THE INTERIOR DRAINAGE IS ALSO DESIGNED TO WITHSTAND THE FUTURE RISK OF A 2-YEAR NOAA RAINSTORM OCCURRING AT THE SAME TIME AS A 100-YEAR STORM SURGE AND 2050S SEA LEVEL RISE

INTERCEPTOR GATE HOUSE

THE INTERIOR DRAINAGE SYSTEM IS DESIGNED TO WITHSTAND A 5-YEAR NOAA RAINSTORM OCCURRING AT THE SAME TIME AS A 100-YEAR STORM SURGE

UPLAND DRAINAGE STRATEGY: PARALLEL CONVEYANCE

EXISTING BRANCH INTERCEPTORS TO BE UPSIZED

INTERCEPTOR GATE HOUSE

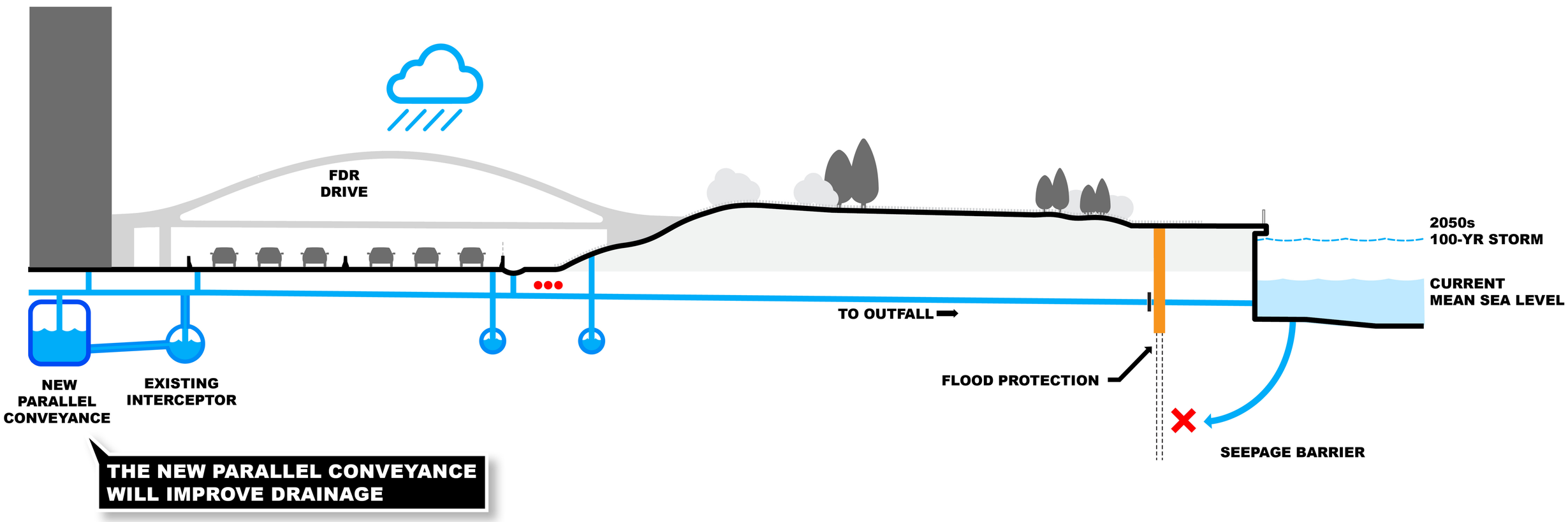
EXISTING BRANCH INTERCEPTORS

3RD ST
20TH ST
10TH ST
6TH ST
AVENUE C
DELANCEY ST
MONTGOMERY ST
FDR DRIVE
EAST RIVER
PROJECT AREA 2
PROJECT AREA 1

LEGEND

- Existing Interceptor
- New Parallel Conveyance
- Interceptor Gate House
- New Flood Protection
- Flood Protection
- Existing VA Hospital Floodwall
- 2015 FEMA 100-YEAR Flood Hazard Boundary
- 2050s FEMA 100-YEAR Flood Hazard Boundary

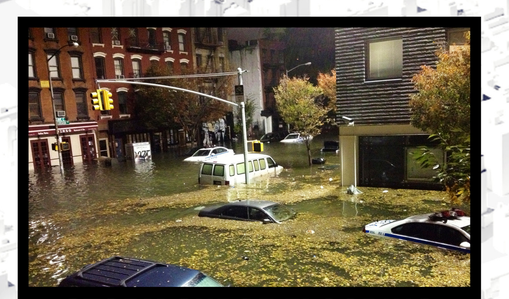
PARALLEL CONVEYANCE SYSTEM SCHEMATIC



THE NEW PARALLEL CONVEYANCE WILL IMPROVE DRAINAGE

PROTECTING AGAINST FUTURE FLOODING

CURRENT FLOODPLAIN



STORM SURGE FLOODING
HURRICANE SANDY, 2012

FEMA 2050s 100-YEAR FLOODPLAIN

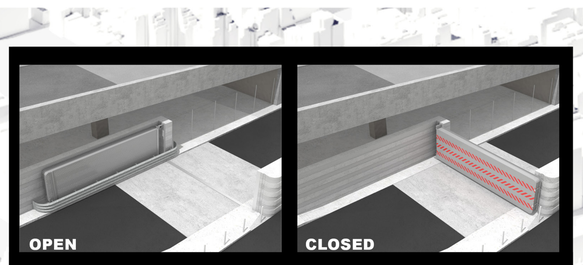
FEMA 2015 100-YEAR FLOODPLAIN

HOUSTON ST
DELANCEY ST
MONTGOMERY ST
FDR DRIVE
AVENUE C
23RD ST
20TH ST
PROJECT AREA 2
PROJECT AREA 1
EAST RIVER

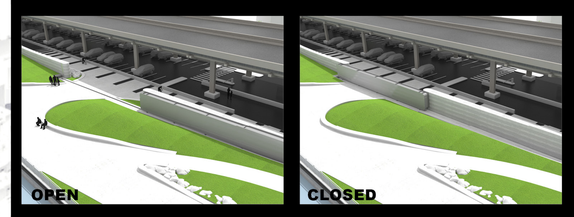
LEGEND

- 2015 FEMA 100-YEAR Flood Hazard Boundary
- 2050s FEMA 100-YEAR Flood Hazard Boundary
- 2015 FEMA 100-YEAR Flood Hazard Boundary
- 2050s FEMA 100-YEAR Flood Hazard Boundary

FLOOD PROTECTION ALIGNMENT



SWING GATES



ROLLER GATES

FLOODWALL & GATES

ELEVATED EAST RIVER PARK

FLOODWALL & GATES

RAISED BULKHEAD AND SEEPAGE BARRIER (BELOW GROUND)

HOUSTON ST
DELANCEY ST
MONTGOMERY ST
FDR DRIVE
AVE
23RD ST
20TH ST
PROJECT AREA 2
PROJECT AREA 1
EAST RIVER

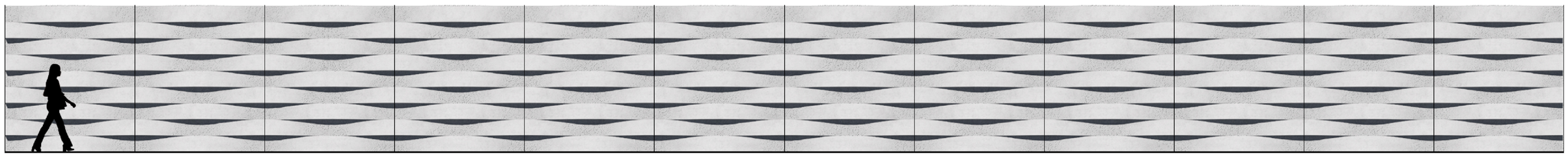
LEGEND

- Swing Gate
- Roller Gate
- New Flood Protection (Below Ground)
- Flood Protection
- Existing VA Hospital Floodwall
- 2015 FEMA 100-YEAR Flood Hazard Boundary
- 2050s FEMA 100-YEAR Flood Hazard Boundary

PROTECTING AGAINST FUTURE FLOODING

FLOODWALL DESIGN

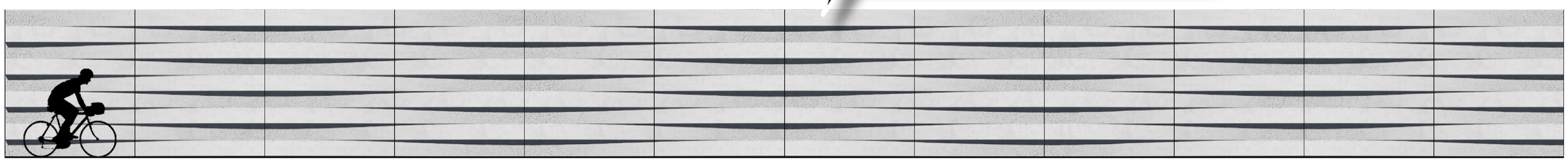
8’-0” MODULE



WALKING PATH **3.1 MPH = 4.5 FT/S**

THE WALL PATTERN ADAPTS TO THE WAY THE PEOPLE INTERACT WITH OR EXPERIENCE IT...

32’-0” MODULE



BIKING PATH **9.6 MPH = 14 FT/S**

96’-0” MODULE

FDR DRIVE **40 MPH = 58.6 FT/S**

FLOODWALL DESIGN SCHEMATIC

PROTECTING AGAINST FUTURE FLOODING

DEPLOYABLE FLOOD GATES

FDR DRIVE GATE - OPEN

FDR DRIVE GATE - CLOSED

STORM CONDITIONS

BUILDING RESILIENCY FASTER

CONSTRUCTION SCHEDULE & PROCESS

GROUND BREAKING

DESIGN & CONSTRUCTION

CONCEPT → PRELIMINARY DESIGN → FINAL DESIGN → PROCUREMENT → CONSTRUCTION

ENVIRONMENTAL REVIEW

DRAFT SCOPE OF WORK → DRAFT EIS → DEIS ISSUED ◆ 4/5 → PUBLIC REVIEW & FINAL EIS → FEIS ISSUED ◆

◆ CITY PLANNING COMMISSION JOINT ULURP/DEIS PUBLIC HEARING

APPROVALS & PERMITTING

PREPARATION → PDC CONCEPTUAL DESIGN ◆ → ULURP CERTIFICATION ◆ 4/22 → PDC PRELIMINARY DESIGN ◆ → JOINT PERMIT APPLICATION ◆ → CITY COUNCIL REVIEW ENDS ◆ → PDC FINAL DESIGN ◆

COMMUNITY ENGAGEMENT

INTERACTIVE COMMUNITY MEETINGS → COMMUNITY MEETINGS & OPEN HOUSES → DEIS & ULURP PUBLIC HEARING ◆ 7/31 → COMMUNITY MEETINGS

COMMUNITY BOARD MEETINGS

CB3 & CB6 COMMITTEES ◆ → CB3 & CB6 FULL BOARDS ◆ → CB3 & CB6 FULL BOARDS ◆ → CB3 & CB6 COMMITTEES ◆

CB6 LAND USE COMMITTEE (ULURP PUBLIC HEARING) - 5/28
CB3 PARKS COMMITTEE (ULURP PUBLIC HEARING) - 6/13

→ CB3 & CB6 FULL BOARDS ◆

CB6 FULL BOARD (ULURP VOTE) - 6/12

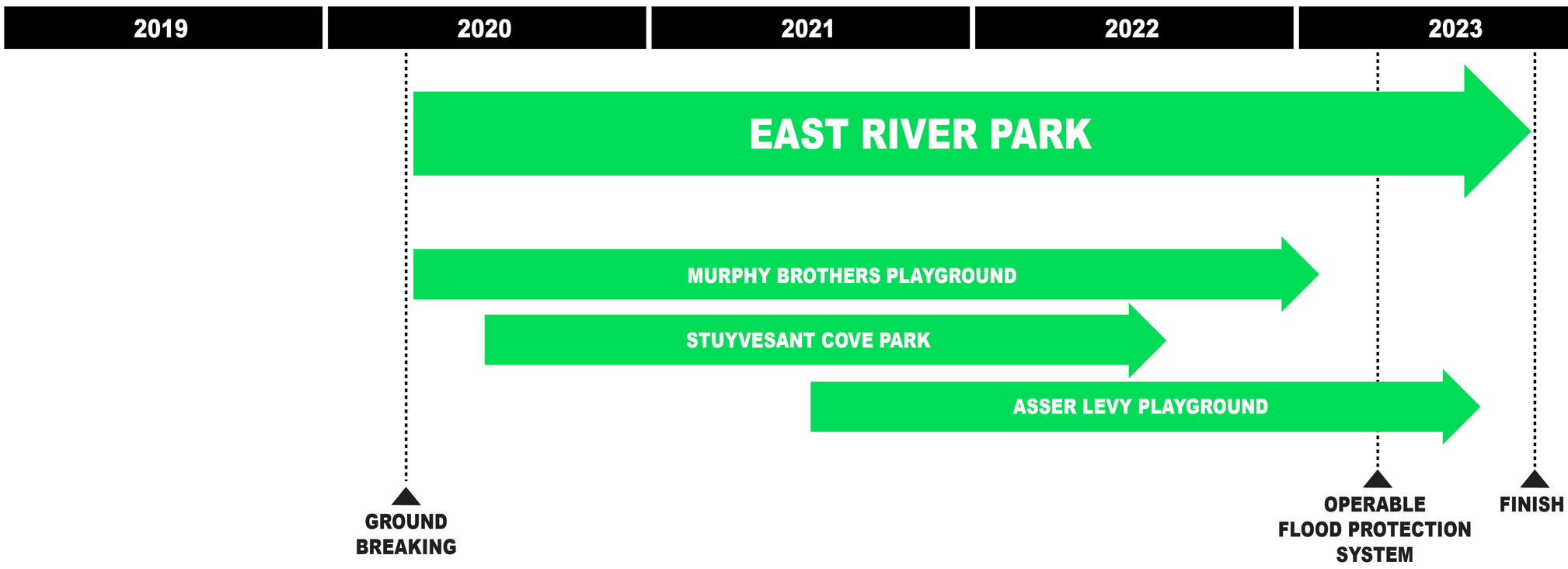
CB3 FULL BOARD (ULURP VOTE) - 6/25

FALL 2018 | WINTER 2019 | SPRING 2019 | SUMMER 2019 | FALL 2019 | WINTER 2020 | SPRING 2020

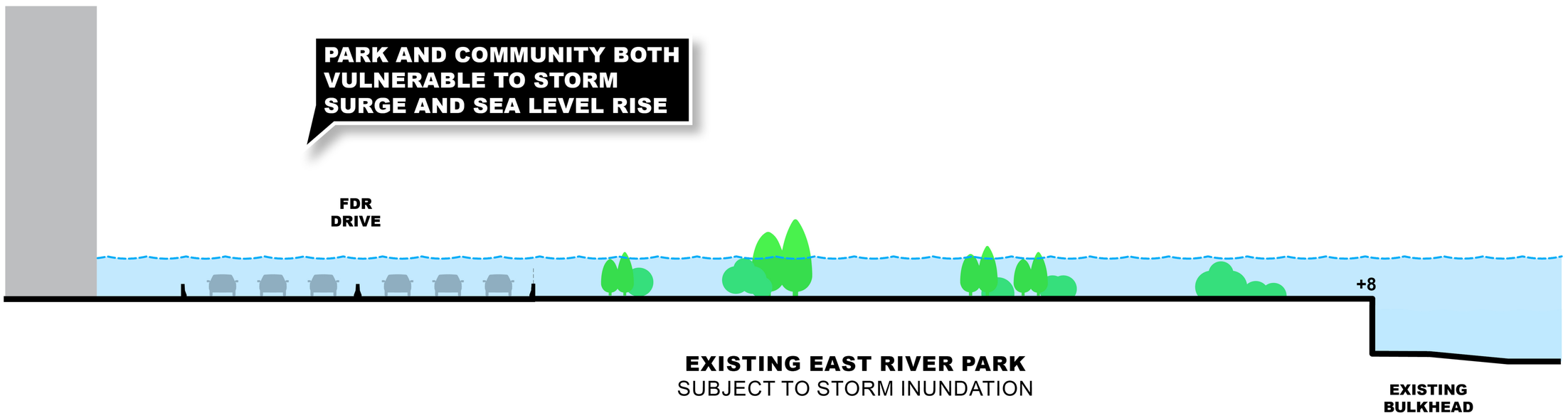
BUILDING RESILIENCY FASTER

CONSTRUCTION SCHEDULE & PROCESS

CONSTRUCTION SCHEDULE:



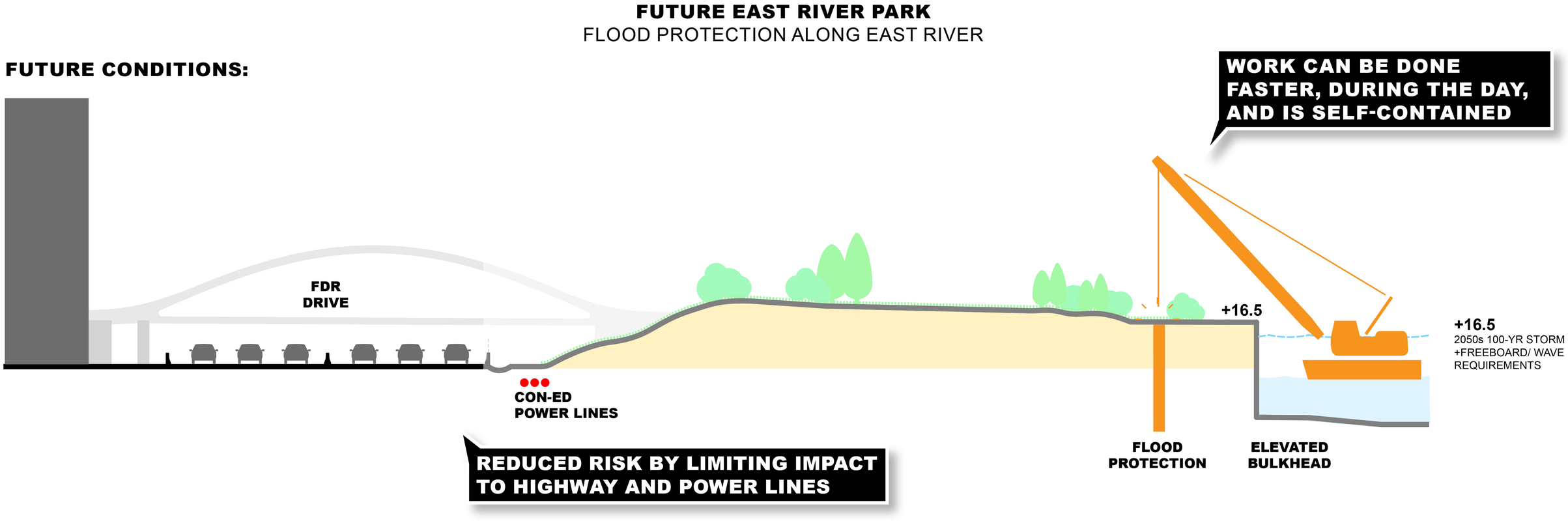
EXISTING CONDITIONS:



EXISTING EAST RIVER PARK
SUBJECT TO STORM INUNDATION

FUTURE EAST RIVER PARK
FLOOD PROTECTION ALONG EAST RIVER

FUTURE CONDITIONS:



CONTINUING COMMUNITY ENGAGEMENT

STAKEHOLDER MEETINGS

LUNGS

LESREADY!

NEW YORKERS FOR PARKS

REGIONAL PLAN ASSOCIATION

NYCHA RA LEADERSHIP: INVITED CAMPUSES INCLUDE BARUCH, CAMPOS, RIIS, WALD, VLADECK, LES II, III & V, AND GOMPERS

LOWER EAST SIDE POWER PARTNERSHIP

NYCHA RIIS RESIDENTS

STUYVESANT TOWN \ PETER COOPER VILLAGE RESIDENTS ASSOCIATION

EAST RIVER ALLIANCE

NYCHA LES II, V & BRACETTI PLAZA RESIDENTS

NYCHA BARUCH RESIDENTS

FRIENDS OF CORLEARS HOOK PARK

NYCHA RIIS HOUSES RESIDENTS

SOLAR ONE

EAST RIVER HOUSES

NYCHA LILLIAN WALD RESIDENTS

WATERSIDE PLAZA MANAGEMENT

GOURVERNEUR GARDENS CO-OP RESIDENTS

WATERSIDE PLAZA TENANT ASSOCIATION

LES ECOLOGY CENTER

PETER STUYVESANT LITTLE LEAGUE

STUYVESANT COVE PARK ASSOCIATION

EAST RIVER ALLIANCE

COMMUNITY BOARD & COUNCIL MEMBER MEETINGS

CM RIVERA

CB3 PARKS COMMITTEE

CB6 LAND USE COMMITTEE

CB3 PARKS COMMITTEE

CM POWERS

CB3 PARKS COMMITTEE

CB6 LAND USE COMMITTEE

CB3 PARKS COMMITTEE

CB6 LAND USE COMMITTEE

REP VELAZQUEZ

CB3 PARKS COMMITTEE

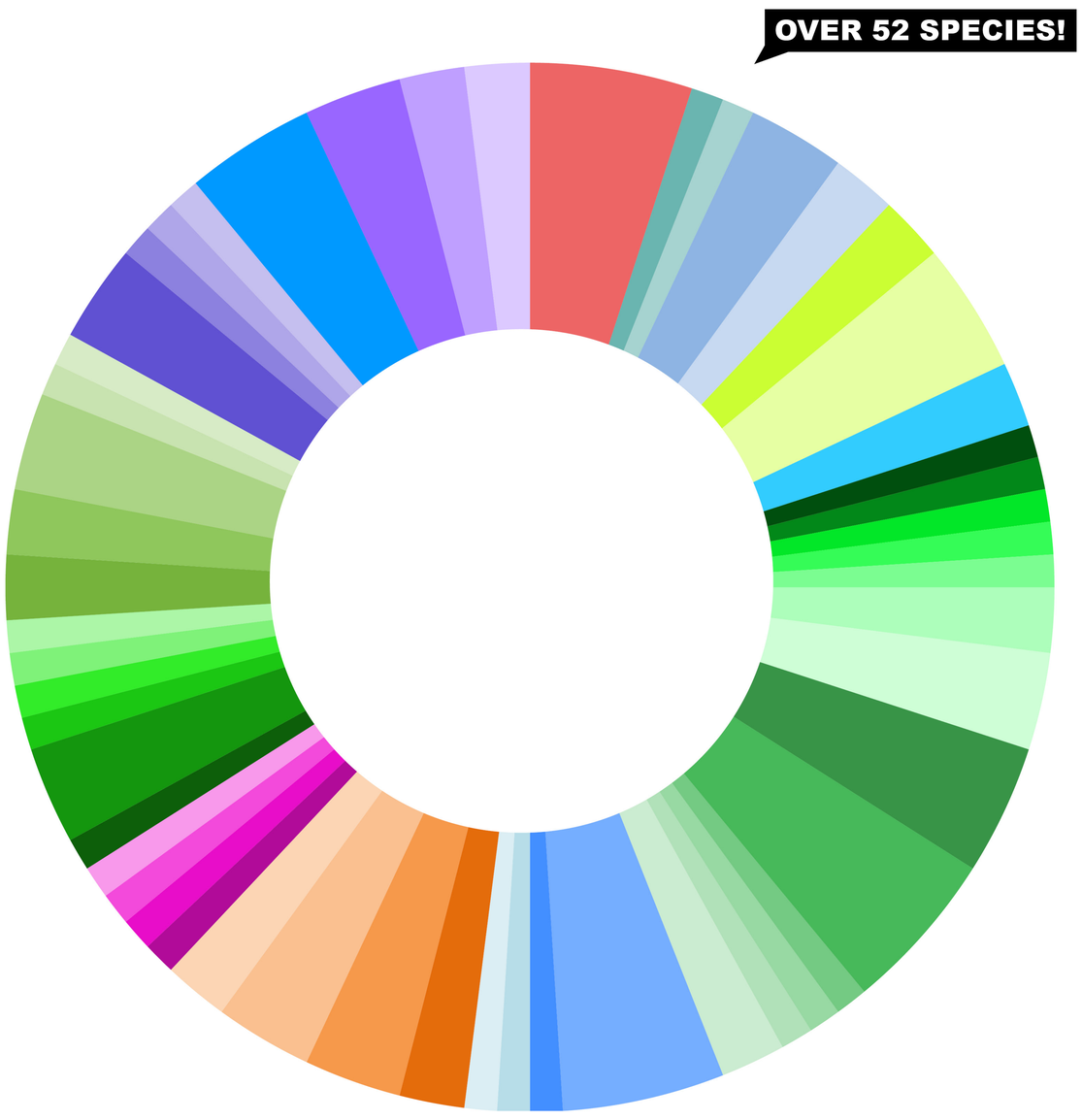
CB6 LAND USE COMMITTEE

MEETING OCCURRED

MEETINGS TO TAKE PLACE/ TO BE SCHEDULED

SUPPORTING DIVERSE & RESILIENT ECOLOGIES

INCREASING PLANT DIVERSITY



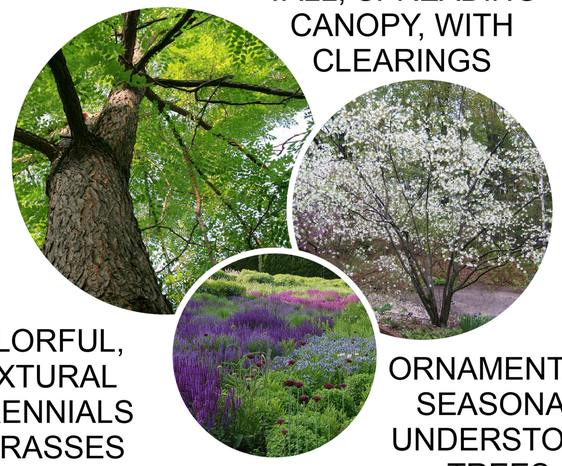
- ACER RUBRUM
- AESCULUS CARNEA
- AMELANCHIER CANADENSIS
- BETULA NIGRA
- CARYA GLABRA
- CARYA OVATA
- CATALPA SPECIOSA
- CELTIS OCCIDENTALIS
- CERCIS RENIFORMIS
- CERCIS CANADENSIS
- CHAMAECYPARIS THYOIDES
- CHIONANTHUS RETUSUS
- CRATAEGUS CRUS-GALLI
- CRATAEGUS VIRIDIS
- GINKGO BILOBA
- GLETITSIA TRIACANTHOS
- GYMNOCLADUS DIOICA
- HAMAMELIS VERNALIS
- HAMAMELIS VIRGINIANA
- ILEX OPACA
- JUNIPERUS VIRGINIANA
- LIQUIDAMBAR STYRACIFLUA
- MAGNOLIA GRANDIFLORA
- MAGNOLIA TRIPETULA
- MAGNOLIA VIRGINIANA
- METASEQUOIA GLYPTOSTROBOIDES
- NYSSA SYLVATICA
- PINUS RIGIDA
- PINUS VIRGINIANA
- PRUNUS SARGENTII
- PRUNUS SEROTINA
- PRUNUS SERRULATA
- PRUNUS X YEDOENSIS
- QUERCUS ALBA
- QUERCUS BICOLOR
- QUERCUS COCCINEA
- QUERCUS LYRATA
- QUERCUS MACROCARPA
- QUERCUS PALUSTRIS
- QUERCUS PHELLOS
- QUERCUS PRINOIDES
- QUERCUS RUBRA
- QUERCUS VELUTINA
- QURCUS NUTTALLI
- RHUS THYPINA
- SASSAFRAS ALBIDUM
- SYRINGA RETICULATA
- SYRINGULA VULGARIS
- TAXODIUM DISTICHUM
- TILIA AMWERICANA
- ULMUS X ACCOLADE
- ULUMUS AMERICANA

PROPOSED SPECIES

DISTRIBUTION FOR ECOLOGICAL RESILIENCE

TALL, SPREADING CANOPY, WITH DAPPLED SHADE

CLEAR UNDERSTORY, OPEN LAWN



TALL, SPREADING CANOPY, WITH CLEARINGS

COLORFUL, TEXTURAL PERENNIALS & GRASSES

ORNAMENTAL, SEASONAL UNDERSTORY TREES

TALL, SPREADING CANOPY, WITH SHADE

DENSE SHRUB LAYER

VEIL OF MULTI-STEM UNDERSTORY TREES

PASTORAL GROVE

LAYERED GROVE

THICKENED GROVE

SUPPORTING DIVERSE & RESILIENT ECOLOGIES

INCREASING PLANT DIVERSITY

RENDERING DEPICTS 15 YEAR TREE AGE

HURRICAN SANDY IMPACT ON TREE CANOPY IN EAST RIVER PARK

NYC PARKS ANTICIPATED NEIGHBORHOOD IMPROVEMENTS

DRAFT LOCATIONS

LEGEND:

- NYC Parks Anticipated Interim Recreation Property
- NYC Parks ESCR Property
- NYCSBS ESCR Property

- Asphalt to Turf / Turf Improvements
- Sports Coating / Painting / Spruce Ups
- Solar Field Lighting
- Net New Space

NYC Parks Interim Recreation Properties North of Map

- **Chelsea Park** : 10th Ave and W27th
- **Robert Moses Playground** : 1st Ave and E42nd
- **St. Vartan Park** : 2nd Ave and E35th
- **John Jay Park** : York Ave and E76th
- **Waterside Pier** : East River and E38th

ASSER LEVY

STUYVESANT COVE

MURPHY BROTHERS

EAST RIVER PARK

First Park

Tompkins Square

Dry Dock

Hamilton Fish

Baruch Playground (Baruch Bathhouse)

Sara D. Roosevelt

Columbus Park

Little Flower (LaGuardia Bathhouse)

Cherry Clinton

Corlears Hook

Coleman

Al Smith Playground/ Rec Center

Pier 42 Upland Park

Tanahey

NYC PARKS ANTICIPATED NEIGHBORHOOD IMPROVEMENTS

INTERIM RECREATION

PARK UPGRADES

SPORTS COATING

RAIN GARDENS

PAINTING

TREE PLANTING

ASPHALT TO TURF

SOLAR FIELD LIGHTS

MORE PROGRAMMING, NEW PARK SPACES

ACCOMMODATING FIELD USERS

LAGUARDIA BATH HOUSE

MORE RECREATIONAL PROGRAMMING

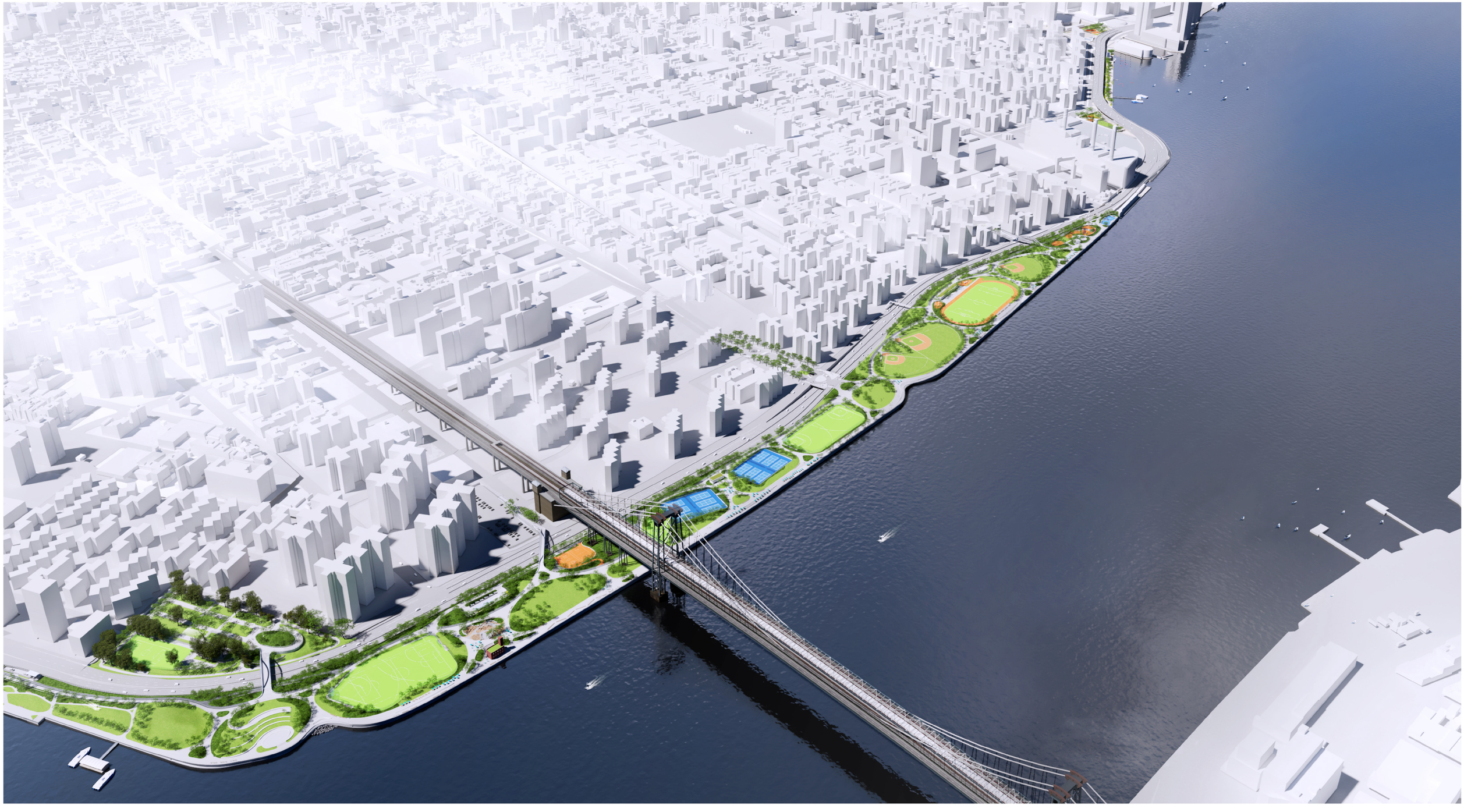
PIER 42 PHASE 1: UPLAND PARK

MORE NEIGHBORHOOD PARK STAFF

PIER 35

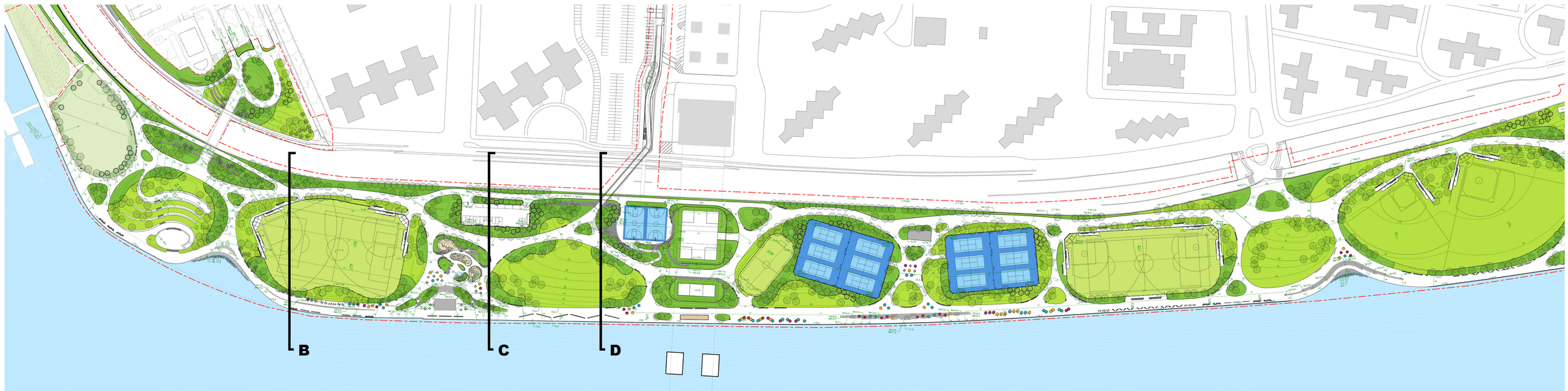
CREATING A MORE RESILIENT WATERFRONT

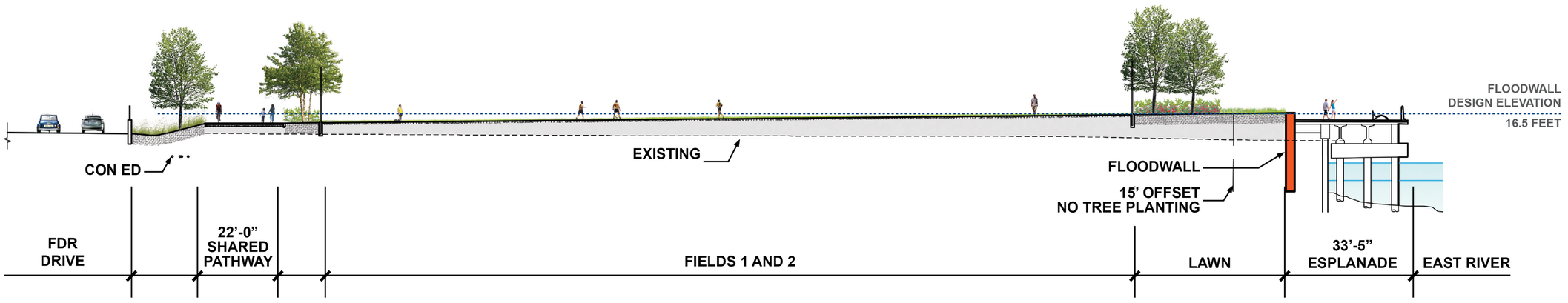
EAST SIDE COASTAL RESILIENCY



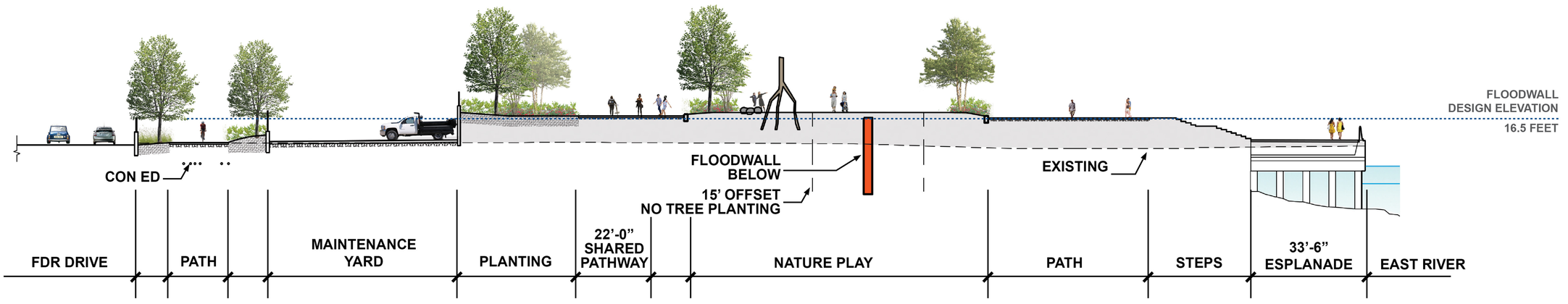
CREATING A MORE RESILIENT WATERFRONT

FROM CORLEARS HOOK TO DELANCEY

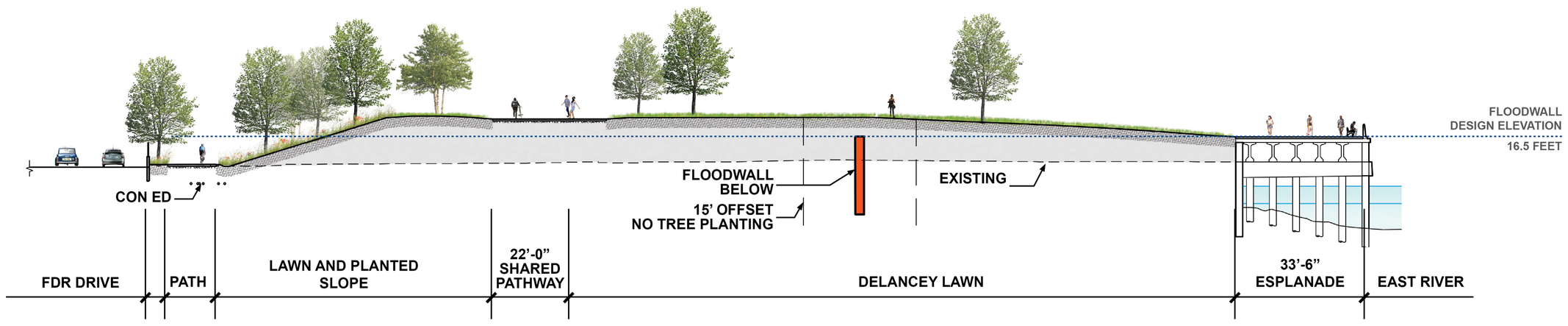




SECTION B FIELDS 1 AND 2



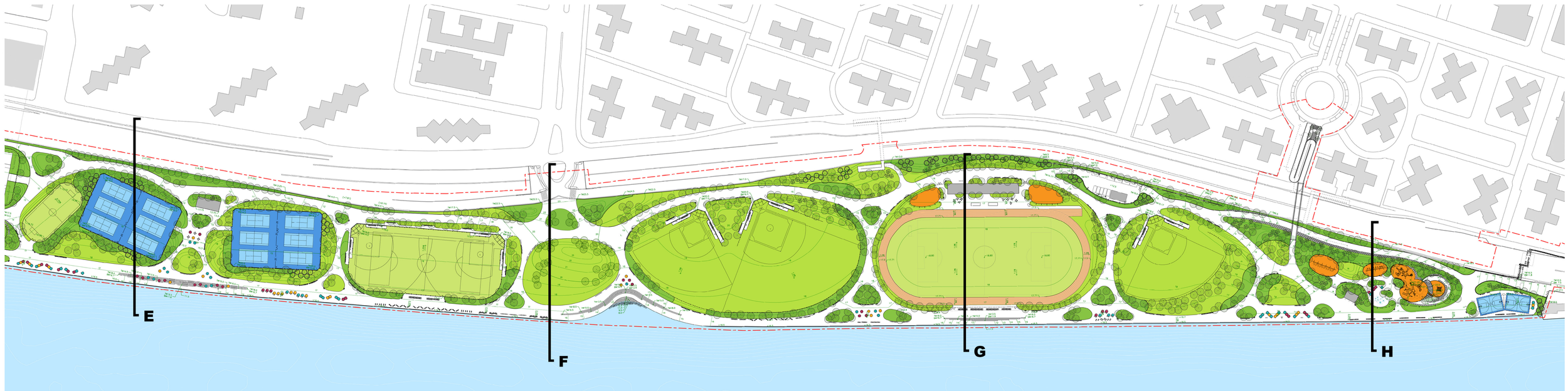
SECTION C NATURE PLAY & AMPHITHEATER

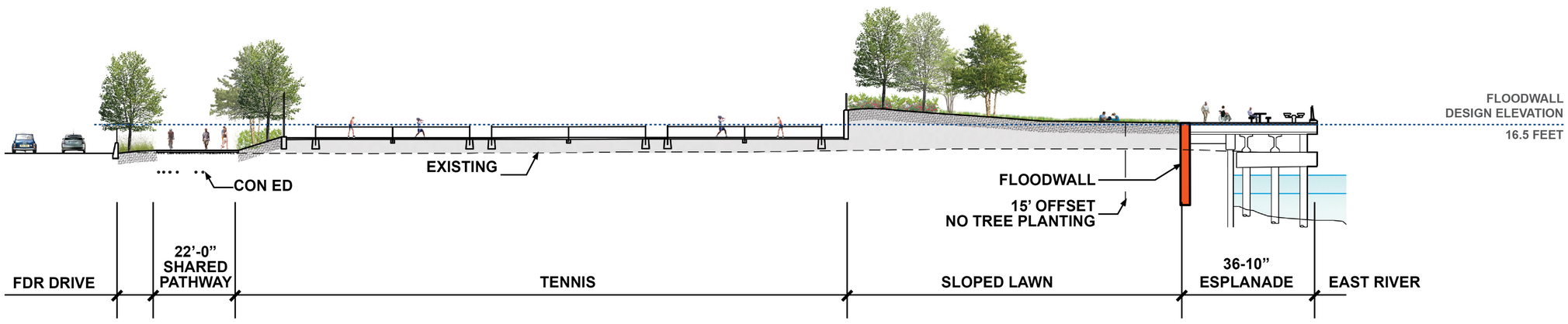


SECTION D DELANCEY ST LAWN

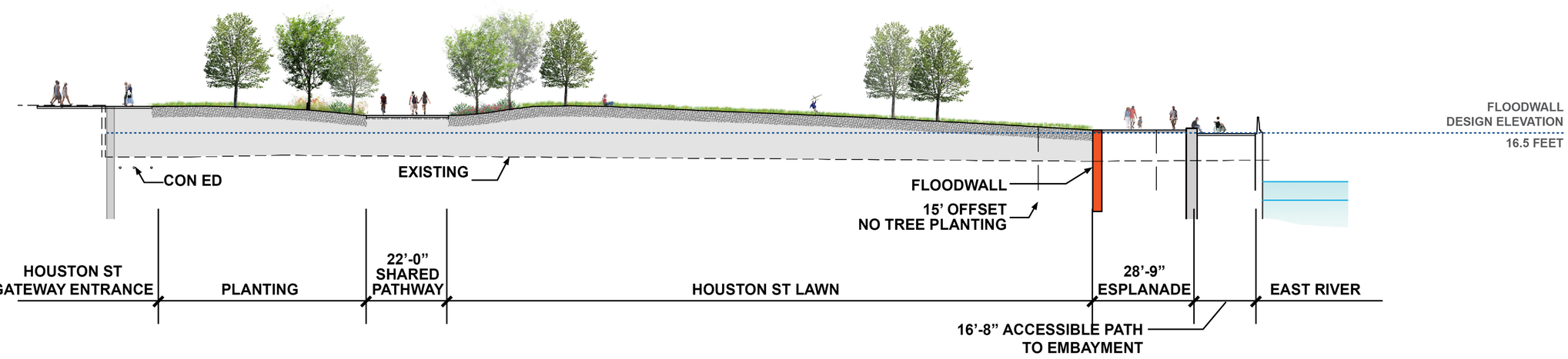
CREATING A MORE RESILIENT WATERFRONT

FROM WILLIAMSBURG BRIDGE TO EAST 10TH STREET

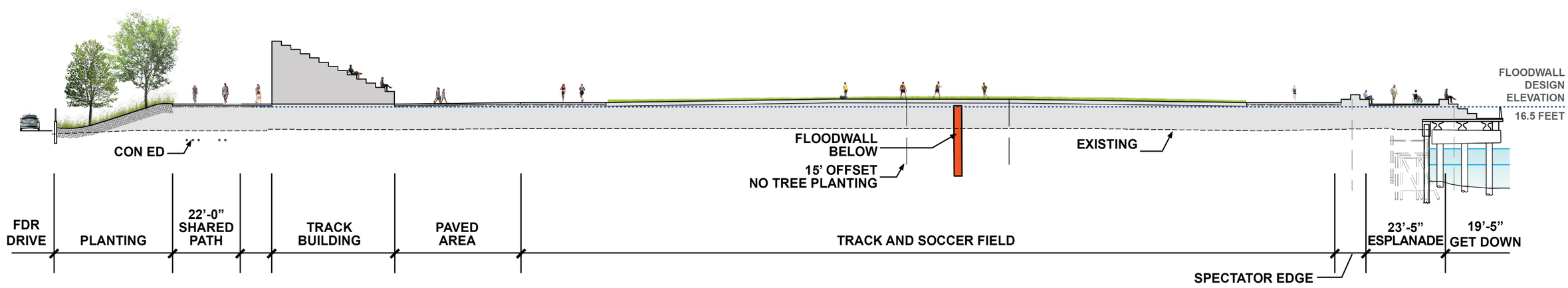




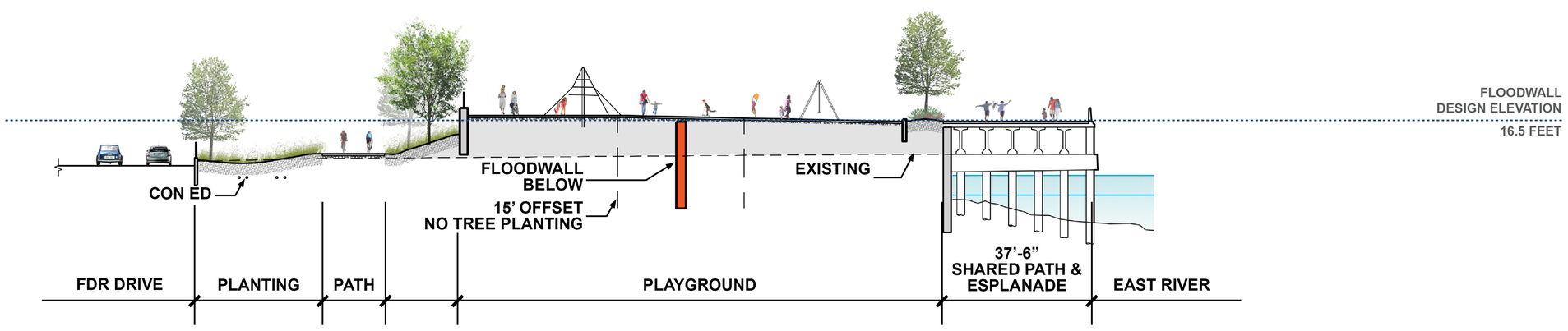
SECTION E TENNIS AND LAWN



SECTION F HOUSTON ST GATEWAY



SECTION G TRACK AND FIELD



SECTION H 10TH ST. PLAYGROUND

CREATING A MORE RESILIENT WATERFRONT

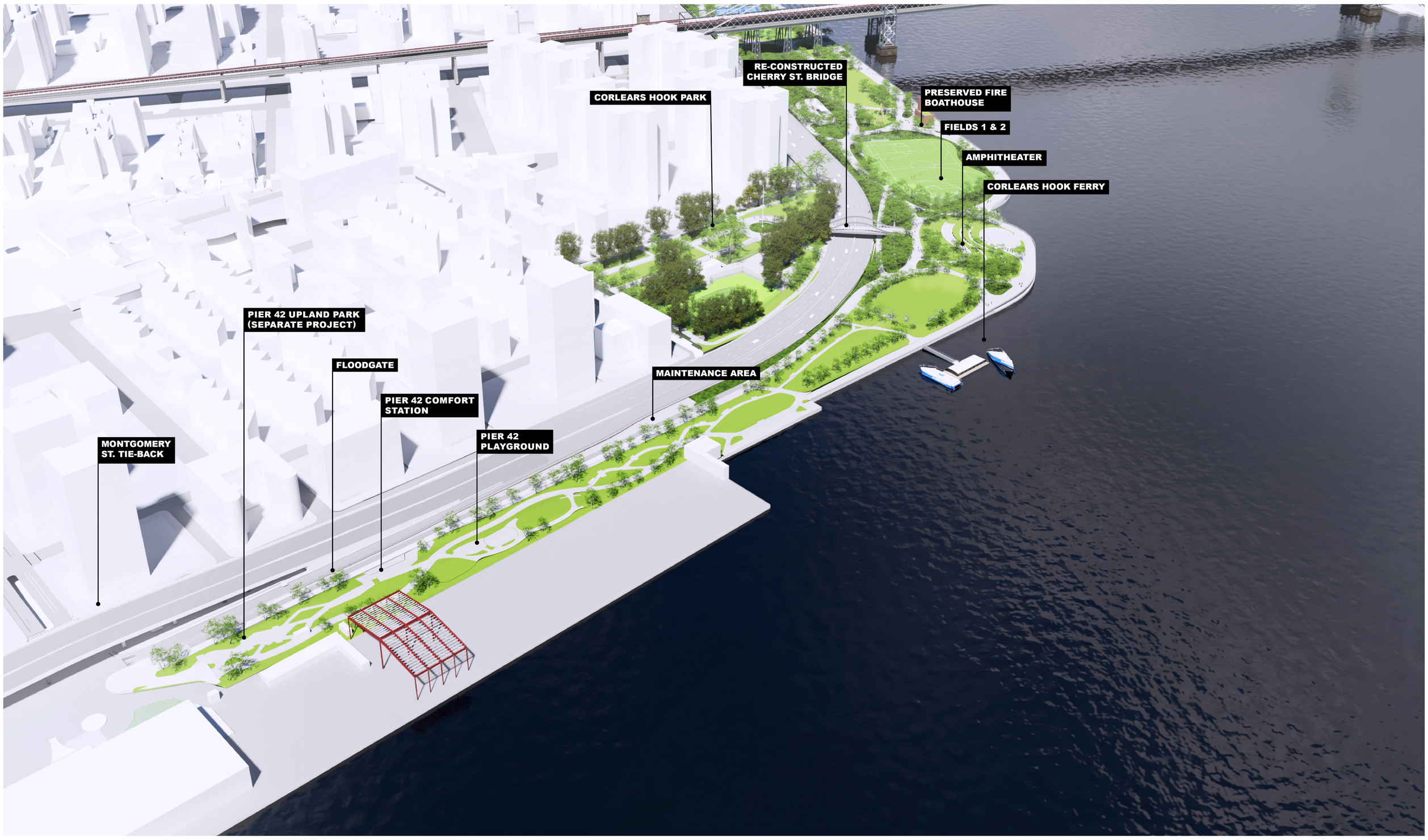
TYING BACK TO HIGHER GROUND

MONTGOMERY ST. TIE-BACK (OPEN)

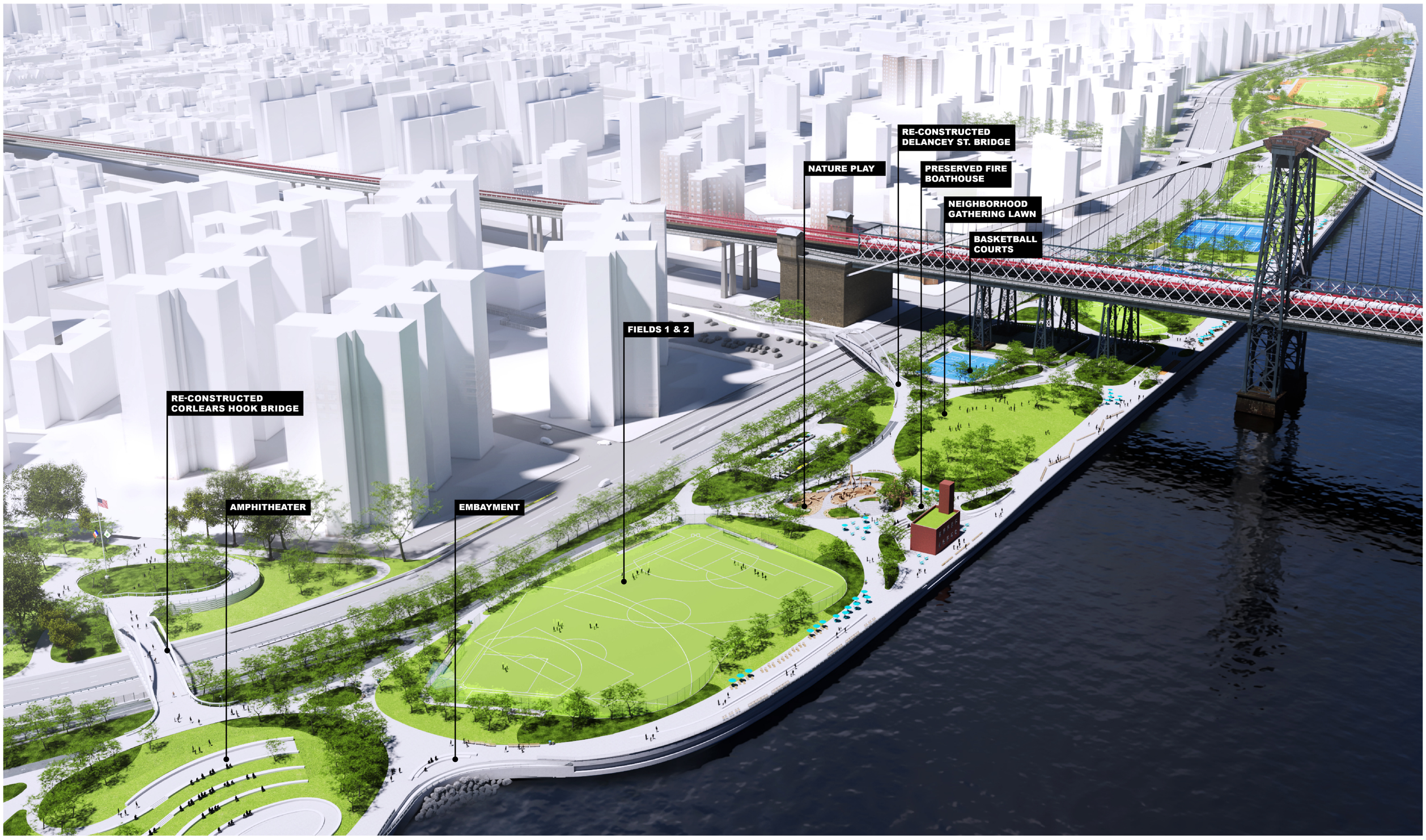
MONTGOMERY ST. TIE-BACK (CLOSED)

CREATING A MORE RESILIENT WATERFRONT

FROM PIER 42 TO DELANCEY



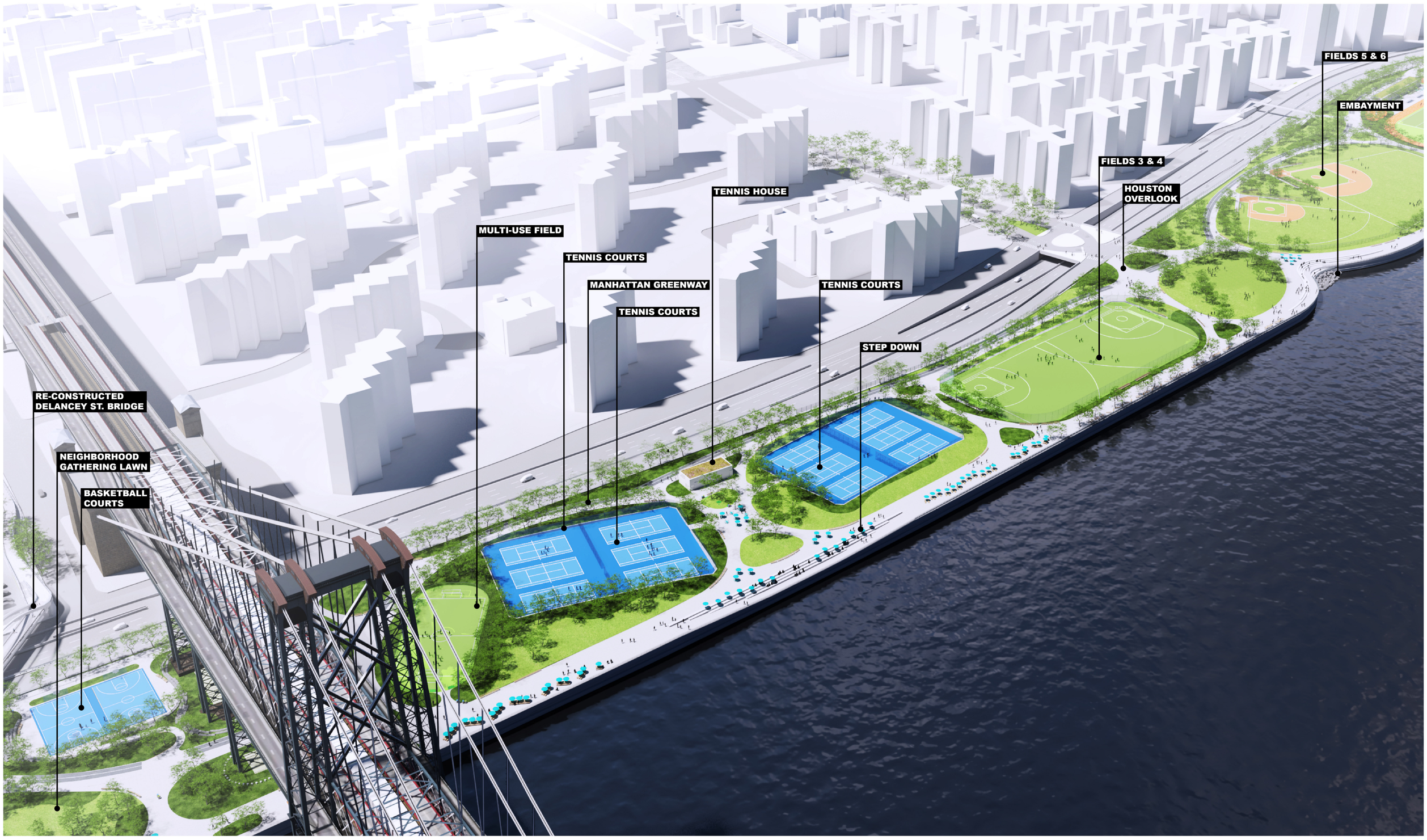
PIER 42 AREA



DELANCEY STREET AREA

CREATING A MORE RESILIENT WATERFRONT

FROM WILLIAMSBURG BRIDGE TO EAST 10TH STREET



NORTH OF WILLIAMSBURG BRIDGE

EAST 10TH STREET AREA

CREATING A MORE RESILIENT WATERFRONT

DELANCEY STREET AREA OVERVIEW

FUTURE CONDITIONS

FUTURE CONDITIONS - STORM

CREATING A MORE RESILIENT WATERFRONT

HOUSTON STREET AREA OVERVIEW

RENDERING DEPICTS 2015 MEAN HIGH TIDE AND 15 YEAR TREE AGE

HOUSTON STREET LANDING LOOKING WEST

HOUSTON STREET LANDING LOOKING AT EAST RIVER PARK

CREATING A MORE RESILIENT WATERFRONT

EAST 6TH STREET AREA

TRACK & FIELD AREA

TRACK & FIELD AREA - STORM CONDITIONS

CREATING A MORE RESILIENT WATERFRONT

PROJECT AREA 2

PROJECT AREA 2 OVERVIEW

MURPHY BROTHERS PLAYGROUND

CREATING A MORE RESILIENT WATERFRONT

STUYVESANT COVE PARK TO 23RD STREET

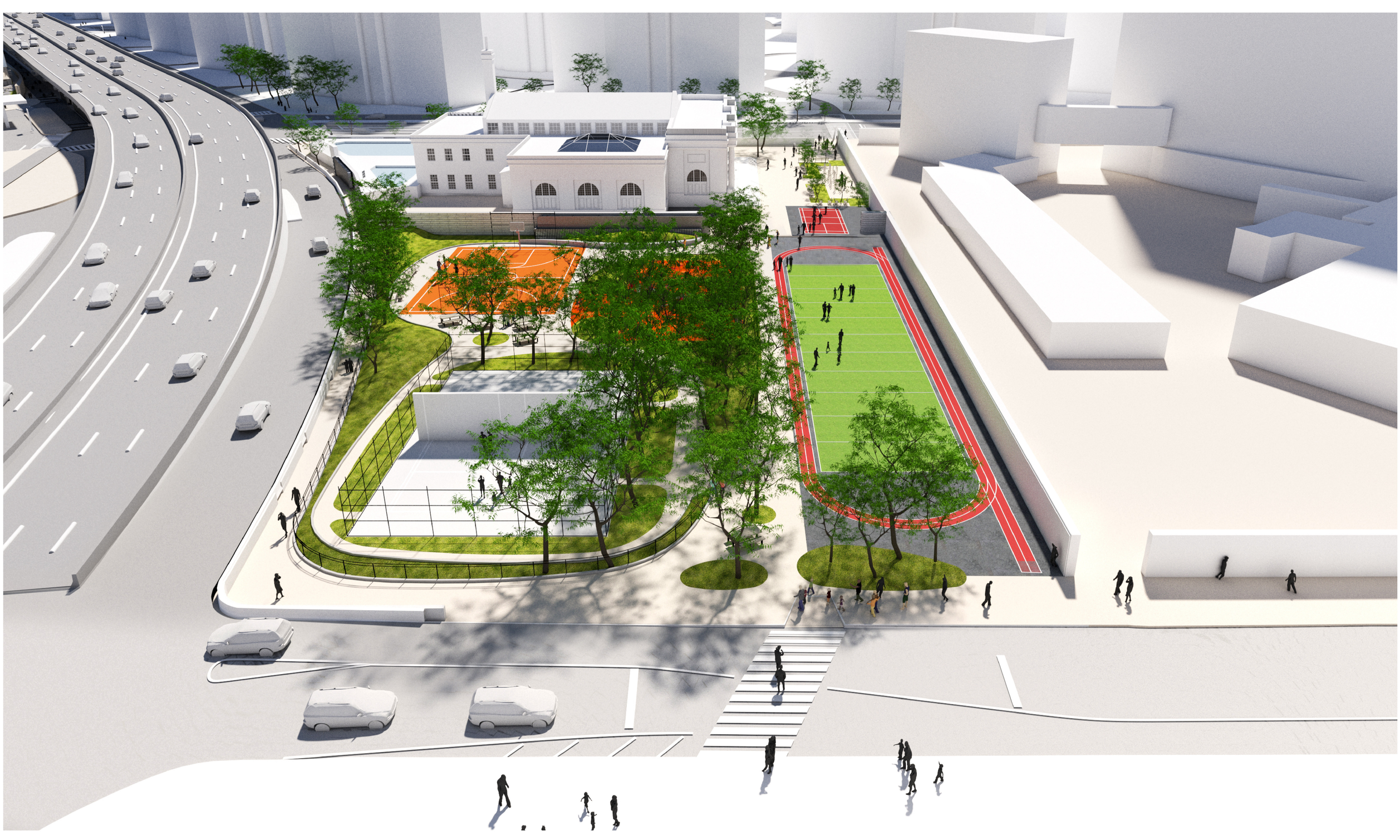
STUYVESANT COVE PARK

STUYVESANT COVE PARK FROM SOLAR ONE

CREATING A MORE RESILIENT WATERFRONT

ASSER LEVY PLAYGROUND

PLAYGROUND OVERVIEW LOOKING WEST



PLAYGROUND OVERVIEW LOOKING SOUTH